**Year 8 Mathematics Yearly Overview 2015-2016 (Updated: 24 October, 2015)**

| **Week** | **Date** | **Branches and topic** |
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| 1 | 24-Aug to 28-Aug | **Orientation:**  Essential agreement  Goal Setting (Math and Me)  Develop your Math Binder  **Data Handling (NT Chapter 7)**  Construct and analysis:  i. Frequency polygons and frequency curves  ii. Cumulative Frequency Polygons and Cumulative Frequency Curves  To read the data associated with percentiles and quartiles from the graphs  **Measures of Central Tendency (NT Chapter 13)**  Calculate and analysis mean, mode, median of un-grouped and grouped data  **Project assessment**  *# Assessment 1 (C D) – Gender Statics (14/9-21/9)*  *Including 2 lessons for practices & 4 lessons for organizing data and report writing* |
| 2 | 31-Aug to 4-Sep |
| 3 | 7-Sep to 11-Sep |
| 4 | 14-Sep to 18-Sep |
| 5 | 21-Sep to 25-Sep | **Simultaneous linear equations in two unknowns (NT Chapter 4)**  Simultaneous linear equations  Graphical Method  Method of Substitution  Method of Elimination  Limitation of the graphical method.  Formulate and solve simultaneous linear equations in two unknowns.  **Written assessment**  *# Assessment 2 (A) – simultaneous linear equations in two unknowns (26/10)* |
| 6 | 28-Sep to 2-Oct |
| 7 | 5-Oct to 9-Oct |
| 8 | 12-Oct to 16-Oct | **Inequalities in one unknown (NT Chapter 8)**  The inequality signs and inequalities  Basic Properties of Inequalities  A. Trichotomy property  B. Transitive property  C. Addition property  D. Multiplicative property  Simply an inequality involving four operations  Solve problems involving linear inequalities in one unknown  *# Assessment 3 (B) – Inequalities (9/11-13/11)*  *\*Another week will be spent on practices and assessment (9/11-13/11)* |
| 9 | 19-Oct to 23-Oct  **(Mid Term Break)** |
| 10 | 26-Oct to 30-Oct |
| 11 | 2-Nov to 6-Nov | **Area and Volume (NT Chapter 10)**  Areas of polygons (Review)  Areas of similar figures  Circumferences of circles (Review)  Areas of circles (Review)  Lengths of arcs and areas of sectors  Volumes of prisms and cylinders  Surface areas of prisms and cylinders  Accumulation of errors |
| 12 | 9-Nov to13-Nov |
| 13 | 16-Nov to 20-Nov |
| 14 | 23-Nov to 27-Nov | Review and catch up |
| 15 | 30-Nov to 4-Dec | Summative Assessment Week  *# Assessment 4 (A) – (Board based test for data handling, central tendency, simultaneous linear equations, inequalities in one unknown and, areas and volumes)* |
| 16 | 7-Dec to 11-Dec | CAS Trip Week |
| 17 | 14-Dec to 18-Dec  (0-1 lesson) | IDU Week |
| 18 | 21-Dec to 25-Dec | Christmas and New Year Holiday |
| 19 | 28-Dec to 1-Jan |
| 20 | 4-Jan to 8-Jan | **Pythagoras’ Theorem (NT Chapter 6)**  Squares and square roots  Pythagoras’ Theorem  Proofs of Pythagoras” Theorem and its converse  Applications of Pythagoras’ Theorem  \*Irrational Numbers  **Trigonometry (NT Chapter 11)**  Trigonometry functions (cosine, sine and tangent of an angle)  Finding angles through cosine, sine and tangent ratios)  Use of calculators (to find value cosine, sine and tangent of an angle)  Applications of Trigonometric ratios  Properties of Trigonometric ratios  *# Assessment 5 (B D) – investigation and real-life problem (within the week 25-29/11 a double lesson)* |
| 21 | 11-Jan to 15-Jan |
| 22 | 18-Jan to 22-Jan |
| 23 | 25-Jan to 29-Jan |
| 24 | 1-Feb to 5-Feb | **Identities and Factorization (NT Chapter 3)**  The concept of identity  Some algebraic identities  Perfect squares  Factorization by:  i. Grouping terms  ii. Using identities |
| 25 | 8-Feb to 12-Feb  Chinese New Year Holiday |
| 26 | 15-Feb to 19-Feb  Chinese New Year Holiday |
| 27 | 22-Feb to 26-Feb |
| 28 | 29-Feb to 4-Mar | **Algebraic Fractions (NT Chapter 9)**  Simple algebraic fractions  Simplification of algebraic fractions  Multiplication and division of algebraic fractions  Adding and subtraction of algebraic fractions  Formulae and substitution  Change of subject of a formula  *# Assessment 6 (A C) – Written assessment - 14/3* |
| 29 | 7-Mar to 11-Mar |
| 30 | 14-Mar to 18-Mar |
| 31 | 21-Mar to 25-Mar |
| 32 | 28-Mar to 1-Apr | Easter Holiday |
| 33 | 4-Apr to 8-Apr | Review and catch up week  (Might also be affected by community project exhibition) |
| 34 | 11-Apr to 15-Apr |
| 35 | 18-Apr to 22-Apr |
| 36 | 25-Apr to 29-Apr |
| 37 | 2-May to 6-May |
| 38 | 9-May to 13-May |
| 39 | 16-May to 20-May |
| 40 | 23-May -27-May |
| 41 | 30-May to 3-Jun | Summative Assessment Week  *# Assessment 6 (A) – 26/5-1/6 (Board based test for all topics learned throughout year 8)* |
| 42 | 6-Jun to 10-Jun | **Getting ready for SLC (20-24/6 – 3-5 lessons)**  **\*Tessellation** |
| 43 | 13-Jun to 17-Jun |
| 44 | 20-Jun to 24-Jun |
| 45 | 27-Jun to 1-Jul |

***\*Topics with the star sign are extended topics***

***At the end of each term, need to spend 1 or 2 lesson(s) to check folder or e-portfolio (i-book)***

Textbooks:

New Trend: New Trend Mathematics (second edition) S2A and S2B by Chan Mung Hung *et al*. Chung Tai Educational Press